

THE CLAIMS

- 1 1. (currently amended) A method of making a golf ball comprising:
2 forming a golf ball subassembly;
3 [[a.]] cooling [[a]] the formed golf ball subassembly such that the golf ball
4 subassembly undergoes a volumetric reduction; and
5 [[b.]] applying a cover layer over the volumetrically reduced golf ball subassembly.
- 1 2. (original) The method of claim 1, ~~further including the step of forming the golf ball~~
2 ~~subassembly before the step of cooling;~~ wherein the step of forming the golf ball subassembly
3 includes forming a core.
- 1 3. (original) The method of claims 2, wherein the step of forming the core includes
2 compression molding a polybutadiene base material.
- 1 4. (original) The method of claim 2, wherein the step of forming the golf ball
2 subassembly further includes forming at least one intermediate layer on the core.
- 1 5. (previously presented) The method of claim 4, wherein the step of forming the at least
2 one intermediate layer includes compression molding or injection molding a thermoplastic or
3 thermoset material over the core.
- 1 6. (original) The method of claim 1, wherein the step of cooling includes decreasing the
2 temperature of the golf ball subassembly to a cooling temperature of less than about 75°F.

1 7. (original) The method of claim 1, wherein the step of cooling includes decreasing the
2 temperature of the golf ball subassembly to a cooling temperature of less than about 50°F.

1 8. (original) The method of claim 6, wherein the cooling temperature is between
2 about -10°F and about 40°F.

1 9. (original) The method of claim 7, wherein the step of cooling further includes
2 maintaining the golf ball subassembly at the cooling temperature for greater than 20 minutes
3 before the step of applying the cover layer.

1 10. (original) The method of claim 7, wherein the step of cooling further includes
2 maintaining the golf ball subassembly at the cooling temperature for greater than 1 hour
3 before the step of applying the cover layer.

1 11. (original) The method of claim 1, wherein the volumetric reduction is at least about
2 1%.

1 12. (original) The method of claim 1, wherein the step of applying the cover layer is a
2 casting process.

1 13. (original) The method of claim 1, wherein the step of applying the cover layer is a
2 reaction injection molding process.

1 14. (currently amended) The method of claim 1, wherein the step of applying the cover
2 layer further includes:

3 providing a first mold half and a second mold half, the first and second mold halves
4 ~~[[have]]~~ having cavities therein;

5 heating the mold halves to a predetermined temperature;

6 adding a cover material to the first mold half cavity;

7 allowing the cover material to gel;

8 inserting a golf ball subassembly into the first mold half cavity;

9 adding the cover material to the second mold half cavity;

10 mating the second mold half with the first mold half so that the cover material and the
11 golf ball subassembly are contained within the cavities in the mold halves.

1 15. (original) The method of claim 14, further including the step of curing the cover
2 material to form the cover layer after the step of mating the second mold half.

1 16. (original) The method of claim 15, wherein the step of curing the cover material
2 further includes:

3 i. maintaining the mold halves at a first temperature for a first predetermined
4 time;

5 ii. heating the mold halves to a second temperature greater than the first
6 predetermined temperature for a second predetermined time; and

7 iii. maintaining the mold halves at a third temperature for a third predetermined
8 time.

1 17. (original) A method of curing a golf ball cover comprising the steps of:

2 a. providing a covered golf ball subassembly in two mold halves;

3 b. maintaining the mold halves at a first temperature for a first predetermined
4 time;

5 c. heating the mold halves to a second temperature greater than the first
6 predetermined temperature for a second predetermined time; and

7 d. maintaining the mold halves at a third temperature for a third predetermined
8 time.

1 18. (original) The method of claim 17, wherein the first temperature has a value sufficient
2 to allow the cover to initially cure.

1 19. (original) The method of claim 17, wherein the first temperature is between about
2 70°F and about 110°F.

1 20. (original) The method of claim 19, wherein the first predetermined time is between
2 about 2 minutes and about 15 minutes.

1 21. (original) The method of claim 17, wherein the first temperature is between about
2 70°F and about 90°F and the first predetermined time is between about 5 minutes and about
3 10 minutes.

1 22. (original) The method of claim 17, wherein the second temperature is greater than
2 about 120°F.

1 23. (original) The method of claim 17, wherein the second temperature is between about
2 130°F and about 170°F.

1 24. (original) The method of claim 17, wherein the second predetermined time is between
2 about 2 minutes and about 10 minutes.

1 25. (original) The method of claim 21, wherein the second temperature is between about
2 130°F and about 140°F and the second predetermined time is between about 3 minutes and
3 about 7 minutes.

1 26. (previously presented) The method of claim 17, wherein the third temperature is less
2 than the second temperature.

1 27. (original) The method of claim 17, wherein the third temperature is between about
2 70°F and about 110°F.

1 28. (original) The method of claim 17, wherein the third predetermined time is between
2 about 5 minutes and about 15 minutes.

1 29. (original) The method of claim 25, wherein the third temperature is between about
2 70°F and about 90°F and the third predetermined time is between about 10 and about 15
3 minutes.

1 30. (original) The method of claim 17, wherein the second predetermined time is less than
2 the first predetermined time and the third predetermined time.

1 31. (original) A method of making a golf ball comprising:

2 a. cooling a golf ball subassembly such that the golf ball subassembly undergoes
3 a volumetric reduction;

4 b. applying a cover layer in mold halves over the volumetrically reduced golf ball
5 subassembly to form a covered golf ball;

6 c. curing the layer including the steps of

7 i. maintaining the mold halves at a first temperature for a first
8 predetermined time;

9 ii. heating the mold halves to a second temperature greater than the first
10 predetermined temperature for a second predetermined time; and

11 iii maintaining the mold halves at a third temperature for a third
12 predetermined time.

1 32. (original) The method of claim 31, wherein the step of maintaining the mold halves at
2 a first temperature includes placing the mold halves in a first insulating chamber.

1 33. (original) The method of claim 31, wherein the step of heating the mold halves to a
2 second temperature includes placing the mold halves in a curing oven.

1 34. (original) The method of claim 31, wherein the step of maintaining the mold halves at
2 a third temperature includes placing the mold halves in a second insulating chamber.

1 35. (original) The method of claim 31, further including the step of cooling the mold
2 halves to a fourth temperature lower than the third temperature.

- 1 36. (original) The method of claim 35, wherein the fourth temperature is between about
- 2 60°F and about 80°F.